

**SOUTHWEST REGIONAL OFFICE**

**MEMO**

**TO:** AQ File #OP-56-00241  
Rockwood Area School District  
Rockwood Jr Sr High School  
Milford Township, Somerset County  
APS 912817 AUTH 1133087 PF 512162

**FROM:** Nicholas J. Waryanka, P.E.   
Air Quality Engineer  
Air Quality, SW Regional Office

**THROUGH:** Thomas J. Joseph, P.E.   
Environmental Engineer Manager  
Air Quality Program 

Mark R. Gorog, P.E.   
Regional Manager  
Air Quality Program

**DATE:** January 30, 2017

**RE:** Comments and Response Document for Renewal of OP #56-00241

Public notice regarding the proposed issuance of the above renewal synthetic minor operating permit was published in the PA Bulletin on Saturday, October 29, 2016. The 30-day public comment period ended on November 29, 2016. The Department did not receive any comments regarding the renewal of this operating permit. The permit was issued on January 30, 2017 with an expiration date of January 30, 2022.

**COMMONWEALTH OF PENNSYLVANIA**  
Department of Environmental Protection  
Southwest Regional Office

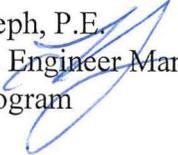
**MEMO**

**TO:** Air Quality Case File OP-56-00241

**FROM:** Nicholas J. Waryanka, P.E.  
Air Quality Engineer  
Air Quality Program



**THROUGH:** Thomas J. Joseph, P.E.  
Environmental Engineer Manager  
Air Quality Program



Mark R. Gorog, P.E.  
Regional Manager  
Air Quality Program



**DATE:** October 7, 2016

**RE:** SOOP Renewal Application OP-56-00241  
Rockwood Area School District  
Rockwood Jr Sr High School  
Milford Township, Somerset County  
APS 912817 AUTH 1133087 PF 512162

**BACKGROUND**

On April 4, 2016, the Department received a renewal synthetic minor operating permit application from the Rockwood Area School District (Rockwood) for their Jr Sr High School in Milford Township, Somerset County. The school is located on at the intersection of Route 653 and Somerset Avenue in the borough of Rockwood. The SIC and NAICS Codes for Elementary and Secondary Schools are 8211 and 611110, respectively.

The campus energy plant includes two (2) tri-fuel boilers as well as a diesel-fired emergency electric generator and a small propane emergency electric generator. The boilers are CNB Tri-Fuel, model #T125L-W units rated at 4.3 mmbtu/hr each. They are designated as Tri Fuel Boiler 1 (Source 031) and Tri Fuel Boiler 2 (Source 032) and burn bituminous coal. They are equipped with single stage Breslove separators which exhaust to a single stack. Both units are set up to burn only coal and run only during the heating season. The primary emergency generator is a Kohler Power Systems, 150 kW diesel-fired unit which is tested weekly. The other generator is a Kohler Power Systems, 20 kW propane-fired unit. These generators are included in the permit as Source 101, Diesel Fired Emergency Generator and Source 102, Propane Fired Emergency Generator, respectively.

Additional smaller emission sources located at this facility include three (3) hot water boilers, six (6) radiant space heaters, and a small gas furnace. These sources are listed in Section II, *Miscellaneous* of the operating permit as insignificant activities.

Rockwood's previous permit expired on August 19, 2016. A renewal application was due no later than February 19, 2016 pursuant to 25 Pa. Code §127.446(e). This regulation requires a renewal application be submitted no earlier than eighteen months but at least six months prior to permit expiration. Because the renewal wasn't received until April 4, 2016, a notice of violation (NOV) was sent on June 22, 2016 for failure to comply with 25 Pa. Code §127.446(e). The application was deemed administratively complete on April 20, 2016.

**EMISSION INFORMATION**

Without taking an elective restriction on coal usage, the facility has the potential to emit enough SO<sub>x</sub> to be defined as a major facility per 25 PA Code Title 121.1. The current permit contains an elective restriction that the tri-fuel boilers will not combust more than 2,070 tons of coal in any consecutive 12-month period. Since the school district only uses about 325 tons of coal per year, it does not have any difficulties complying with this restriction. In addition to the throughput restriction the permit limits maximum sulfur content of the coal to 2.4% and maximum ash content to no more than 10%.

The Synthetic Minor permit for the facility will include the boilers with Breslove separators and the emergency generators for a total of four sources and two control devices. The Breslove separators have a minimum estimated particulate matter removal efficiency of 70%. Coal analyses must be submitted to the Department upon request. The boilers are equipped with opacity monitoring devices with alarms to control excess air flow if opacity is exceeded.

The primary pollutant of concern is sulfur dioxide from coal combustion. The throughput restriction will ensure that the school district remains a Synthetic Minor for SO<sub>2</sub>.

The 2,070 tons limit corresponds to the following potential to emit (PTE) estimates for the Tri-Fuel Boilers based on US EPA AP-42, Section 1.1, emission factors:

**Table 1 – Tri-Fuel Boilers PTE After Limitation of 2,070 tpy Coal**

<b>Pollutant</b>	<b>PTE in tpy</b>
NO <sub>x</sub>	9.8
CO	11.4
VOC	1.3
SO <sub>2</sub>	77.0
PM*	4.7

\* Based on a 70% control efficiency for Breslove separators

The emergency generators are limited to 500 hrs per consecutive 12-month period and thus emissions from these units are essentially negligible. Total facility wide potential to emit is therefore essentially the same as presented in Table 1, above.

## **REGULATORY ANALYSIS**

There are several relatively recent federal regulatory requirements which could potentially apply to this facility. National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR Part 63, Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines (SRICE) applies to both major and area sources of hazardous air pollutants (HAPs) such as Sources 101 and 102. However, 40 CFR §63.6590(b)(3)(vii) exempts existing institutional emergency SRICE located at area sources of HAP emissions from having to meet the requirements of Subpart ZZZZ.

40 CFR 63, Subpart JJJJJ, NESHAPs for Industrial, Commercial, and Institutional Boilers Area Sources applies to almost any area source boiler that is not defined in this subpart as a “gas-fired boiler” in accordance with 40 CFR §63.11195(e). “Gas-fired boiler” is defined in 40 CFR §63.11237 as including “any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.” Since the tri-fuel boilers (Sources 031 and 032) generally burn coal exclusively, the units are subject to Subpart JJJJJ.

Notification of Subpart JJJJJ applicability was due to the US EPA as well as the Department on January 20, 2014. Sources 031 and 032 fall under the category of “coal-fired” boilers with a heat input capacity of less than 10 mmbtu/hr.

The primary requirement for affected units of this type under Subpart JJJJJ is the performance of an initial tune-up by March 21, 2014, in accordance with 40 CFR §63.11223(b) and then subsequent tune-ups thereafter as detailed in Table 2 to Subpart JJJJJ. §63.11205 requires that the sources be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions. §63.11225(a) requires initial notification of Subpart JJJJJ applicability as well as submission of a Notification of Compliance Status. §63.11225(b) requires submission upon request of a periodic compliance certification verifying that tune-ups were conducted as required and reporting of any deviations from applicable requirements, the time they occurred, and the corrective actions taken. §63.11225(c) requires recordkeeping of notifications, reports, and all conducted tune-ups, malfunctions, inspections, monitoring, and maintenance.

There are no applicable New Source Performance Standards. 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units applies to combustion units with maximum design heat input capacities greater than 10 mmbtu/hr that commenced construction after June 9, 1989. The units at Rockwood are rated below the 10 mmbtu/hr threshold.

## **PA Requirements**

Title 25 Pa. Code §123.11(a) prohibits particulate matter emissions from combustion units in excess of 0.4 pound per million Btu of heat input. 25 Pa. Code §123.13(c) limits particulate matter emissions from processes to 0.04 grains per dry standard cubic foot (gr/dscf). 25 Pa. Code §123.21 limits SO<sub>2</sub> emissions from sources other than combustion units to 500 ppmv, dry basis. 25 Pa. Code §123.22 limits SO<sub>2</sub> emissions from combustion units in nonair basin areas to the rate of 4.0 pounds per million Btu of heat input over a 1-hour period.

25 Pa. Code §123.41 limits visible emissions not to equal or exceed 20 percent opacity for a period or periods aggregating more than 3 minutes in any 1 hour and never to equal or exceed 60 percent at any time. The permittee is required to do monthly monitoring while either boiler is operating (during the heating season) for fugitive, visible, and malodor emissions and to keep records of the observations. Annual fuel usage and coal analysis records are required to be kept.

## **OPERATING PERMIT REVISIONS/RFDs**

There were no plan approvals, RFDs, or de minimis emission increases processed for the facility since issuance of the last permit. There are no additional trivial or insignificant emission sources to be added to the permit. The only noteworthy change to the operating permit from the previous version is the addition of Subpart JJJJJ requirements for Sources 031 and 032.

## **MUNICIPAL AND PUBLIC NOTIFICATIONS**

Municipal (Rockwood Borough and Milford Township) and county notifications regarding the renewal permit application were made on April 6, 7, and 16, 2016. The last inspection at the facility occurred on January 28, 2011, and there were no violations noted. Notification of issuance of a proposed renewal operating permit for the facility will be published in the PA Bulletin. The applicant and the Air Quality District Supervisor for the area will also be provided a copy of the proposed renewal permit for comment.

## **CONCLUSIONS AND RECOMMENDATIONS**

I have completed my review of the operating permit application for Rockwood Area School District. Rockwood has met the regulatory requirements associated with this application submittal. The attached draft permit includes the applicable regulatory requirements for this facility and includes terms and conditions based on the permit application and plant inspections. It is my recommendation to issue a Synthetic Minor State Only operating permit for this facility containing the elective restrictions on coal usage and operating hours for the emergency generators. I recommend that the proposed operating permit be issued for a five (5) year permit term.